

CLAIMS:

1. A method of forming a pile fabric of continuous filament non-textured yarn, the method comprising the steps of:

(a) providing a continuous filament non-textured yarn,

5 (b) heating and drawing simultaneously said continuous filament non-textured yarn to pre-stress said yarn;

(c) providing a base portion,

(d) forming said continuous filament non-textured yarn, which has been pre-stressed, into a plurality of tufts upon said base portion such that said tufts
10 and said base portion define a fabric, and

(e) heating said fabric, thereby providing a bulked pile fabric.

2. The method of claim 1 wherein said drawing step comprises underdrawing said yarn.

3. The method of claim 1 wherein said heating and drawing step (b) is accomplished at a temperature of greater than about 150 degrees C.

4. The method of claim 1 wherein said heating and drawing step (b) is accomplished at a temperature of greater than about 180 degrees C.

5. The method of claim 1 wherein said heating and drawing step (b) is accomplished at a temperature of greater than about 200 degrees C.

6. The method of claim 1 wherein said heating and drawing step (b) is accomplished at a temperature of about 215 degrees C or greater.
7. The method of claim 1 wherein said heating and drawing step (b) is conducted by employing a heating time of no greater than about 0.063 seconds.
8. The method of claim 1 wherein said heating and drawing step (b) is conducted by employing a heating time of no greater than about 0.056 seconds.
9. The method of claim 1 wherein said heating and drawing step (b) is conducted by employing a heating time of no greater than about 0.052 seconds.
10. The method of claim 1 wherein said heating and drawing step (b) is conducted by employing a heating time of no greater than about 0.047 seconds.
11. A method of forming a pile fabric, the method comprising the steps of:
 - (a) providing a continuous filament non-textured yarn;

- 5 (b) simultaneously (i) heating said yarn at greater than about 100
degrees Centigrade, and (ii) underdrawing said continuous filament
non-textured yarn, thereby pre-stressing said yarn;
- (c) providing a base portion;
- (d) forming said pre-stressed continuous filament non-textured yarn
10 into a plurality of tufts upon said base portion such that said tufts and
said base portion define a fabric structure; and
- (e) heating said fabric structure.
12. The method of claim 11 wherein said heating time/ drawing time in step
(b) is no greater than about 0.063 seconds.
13. The method of claim 11 wherein said heating/drawing time in step (b) is
no greater than about 0.052 seconds.
14. A method of forming a pile fabric, the method comprising the steps of:
- (a) providing a continuous filament non-textured yarn;
- (b) simultaneously (i) heating said yarn at a a temperature of at least
5 about 200 degrees Centigrade, and (ii) drawing said continuous
filament non-textured yarn at a draw ratio of greater than about 1.0 by
employing a heating/ drawing contact time of no greater than
about 0.063 seconds;
- (c) providing a base portion;

- 10 (d) forming said continuous filament non-textured yarn into a plurality
 of tufts upon said base portion such that said tufts and said base
 portion define a fabric structure; and
 (e) heating said fabric structure.

15. The method of claim 14 wherein said heating/drawing contact time is no greater than about 0.056 seconds.

16. The method of claim 14 wherein said heating/drawing contact time is no greater than about 0.052 seconds.

17. The method of claim 14 wherein said fabric structure produced in step (e) provides an average void area between said tufts of less than about 0.41 square millimeters.

18. The method of claim 17 wherein said average void area is between about 0.21 and about 0.41 square millimeters.

19. The method of claim 17 wherein said average void area is between about 0.21 and about 0.35 square millimeters.

- 5 20. The method of claim 17 wherein said average void area is about 0.35 square millimeters or less.